

US Military Studies on Adverse Childhood Experiences

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Overview and Acknowledgments

1991 Air Force Study of Recruits

Dr. Collin Smikle and Team, UC San Francisco, now Reproductive Science Center of the San Francisco Bay Area

1995 Army Study of Combat Support and Service Support Soldiers

Dr. Leora Rosen and Team, Walter Reed Army Institute of Research, now with US Department of Justice

1996 Navy Family Advocacy Program Study

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Dr. Joel Milner and Team, Northern Illinois University

Navy SHIP Studies

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Dr. Gerald Larson and Team, Naval Health Research Center

USMC RAP Studies

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US Military Studies on Adverse Childhood Experiences

1. What has been done?

Settings, methods, and instruments used.

2. What has been found?

Prevalence of ACE-related histories.

3. What outcomes have been evaluated?

ACE histories related to risk factors, military performance, attrition, etc. (limited review presented here)

1991 Air Force Study of Recruits



www.infocusmagazine.org

- Evaluated data from 28,918 recruits in Air Force basic training in Lackland, TX Oct 1991 to Sep 1992.
- Leveraged the existing “History Opinion Inventory” (HOI)
 - Used as a screening tool in recruits, 1975 ~ 1995
 - Given in 1st few days of training to identify “high risk individuals who may have difficulty adapting” to the military; referred them for further evaluation.
 - 50-item instrument with one ACE-related question for Y/N response: “I believe I have been sexually abused”

1991 Air Force Study of Recruits: Findings

- Past sexual abuse was reported on the HOI by 1.5% of men and 15.1% of women.
- Overall attrition from basic training was ~5%. Attrition was 3.7 times more likely in male victims and 1.6 times more likely in female victims of past sexual abuse.
- Recruits with a history of sexual abuse who completed basic training performed similarly to other recruits in their first year of service. Outcomes evaluated included: graduation rates from advanced schools, eligibility for promotion, drug/substance abuse reports, and misconduct reports.

Smikle et al. The impact of sexual abuse on job attrition in military recruits. Mil Med 1996;161(3):146-8.

1995 Army Study of Combat Su and Service Support Soldiers



www.defenselink.mil

- Surveyed 1072 men and 305 women soldiers from combat support and service support units at 3 major Army bases; participation rates were ~1/3 of each invited unit; administered May-June 1995.
- Questionnaire focused on cohesion and soldier well-being in gender-mixed units, included questions on psychological symptoms, and several ACE questions.

1995 Army Study of Combat Support and Service Support Soldiers: Methods

Questionnaire included:

- Childhood Trauma Questionnaire (CTQ)
 - 5 sexual abuse items (e.g., “was touched in sexual way”)
 - 9 emotional neglect items (e.g., “someone to take care of me”)
 - 11 physical-emotional abuse items (e.g., “called lazy or stupid”)
 - 5 physical neglect items (e.g., “had enough food in the house”)
- Specific Childhood Physical Abuse (CPA) questions
 - Medical treatment for injuries inflicted by a family member
 - Having been injured by a family member so badly that it was noticed by someone like a teacher or neighbor
 - Regarding oneself as ever having been physically abused
 - Being beaten with a hard object often or very often
- Specific Childhood Sexual Abuse (CSA) questions
Experience before age 18 that respondent now considered sexual abuse, including intercourse, touching, grabbing, kissing, exhibiting body parts or taking nude photographs, oral sex or sodomy.

1995 Army Study of Combat Support and Service Support Soldiers: Findings

- 56% of men and 66% of women soldiers reported a history of any form of abuse in childhood.
- 50% of men and 48% of women reported history of CPA.
- 17% of men and 51% of women reported history of CSA.
Based on CTQ questions, 9% of men and 28% of women
Based on CSA questions, 15% of men and 49% of women
reported history of childhood sexual abuse
- 11% of men and 34% of women reported a history of both physical and sexual abuse in childhood.

1995 Army Study of Combat Support and Service Support Soldiers: Findings

- Psychological symptoms:
Emotional neglect associated with obsessive symptoms.
CPA associated with somatization and phobic anxiety.
- Gender-related personality characteristics:
CPA associated with negative masculinity (e.g., aggression).
CSA associated with negative femininity (e.g., subordination)
- Adaptation to military life:
Childhood emotional neglect associated with lower unit cohesion and lower confidence in leaders.

1995 Army Study of Combat Support and Service Support Soldiers: Findings

- Work environment:

Both sexual and physical-emotional abuse during childhood were associated with unwanted sexual experiences and sexual harassment in the workplace.

Rosen LN, Martin L. The measurement of childhood trauma among male and female soldiers in the US Army. *Mil Med* 1996;161(6):342-5.

Rosen LN, Martin L. Childhood antecedents of psychological adaptation to military life. *Mil Med* 1996;161(11):665-8.

Rosen LN, Martin L. Impact of childhood abuse history on psychological symptoms among soldiers in the US Army. *Child Abuse Negl* 1996;20:1149-60.

Rosen LN, Martin L. Long-term effects of childhood maltreatment history on gender-related personality characteristics. *Child Abuse Negl* 1998;22:197-211.

Rosen LN, Martin L. Childhood maltreatment history as a risk factor for sexual harassment among U.S. Army soldiers. *Violence Vict*

1996 Navy Family Advocacy Program Study of Recruits



www.nsgreatlakes.navy.mil

- Surveyed 11,195 recruits, 5969 men and 5226 women, beginning Navy basic training in Great Lakes, IL June 1996 – June 1997
- Randomized to anonymous or confidential conditions.
“Confidential” participants provided SSNs and could receive follow-up questionnaires 6 months, 1 year, and 2 years later.
- Participants were given 3 hours to complete questionnaires containing more than 600 items with many sub-sections.

1996 Navy Family Advocacy Program Study of Recruits: Methods

- Self-defined abuse questions:
 - Before the age of 18, were you ever physically abused?
 - Before the age of 18, were you ever sexually abused?
 - “My mother/father was verbally abusive to me”

1996 Navy Family Advocacy Program Study of Recruits: Methods

- Behaviorally defined CPA

Modified Conflict Tactics Scale – Parent-Child Version (CTS-PC)
19 items on conflict resolution techniques used by parent(s)
during “worst year” of respondent’s life before age 18.

- Behaviorally defined CSA [sample questions]

“Before you were 18 years of age, did a male or female family member...
- have oral, anal, or vaginal intercourse (with any amount of penetration),
or insert a finger or object in your anus or vagina?
- ever kiss you in a sexual way, or touch your body in a sexual way, or make you touch their sexual parts but you did not have oral, anal, or vaginal intercourse?” [choose family members and number of times]

Similar questions asked regarding non-family members who were 5 or more years older than respondent.

1996 Navy Family Advocacy Program Study of Recruits: Methods

- Sexual Experience Survey Questions

Assessed female victimization and male perpetration of sexual assault or rape.

Sample question:

“Have you made a female have sexual intercourse – putting all or part of your penis in her vagina even if you didn’t ejaculate or come – by giving her alcohol or drugs or getting her high or drunk?”

Respondents asked to indicate experiences from 14 to 18 years of age, and after 18th birthday.

1996 Navy Family Advocacy Program Study of Recruits: Methods

Child Abuse Potential Inventory

- 160 items
- Designed to screen adults for child physical abuse risk.
- Respondent asked to agree or disagree with, e.g.,

“I sometimes worry that I cannot meet the needs of a child”

“Children should never disobey”

“Spanking that only bruises a child is okay”

“Sometimes I fear that I will lose control of myself”
etc.

1996 Navy Family Advocacy Program Study of Recruits: Methods

Psychological Questions

- Trauma Symptom Inventory
 - 100 items
 - Respondents asked how often they experienced symptoms or behaviors (e.g., using sex to get love or attention) in past 6 months.
- Los Angeles Symptom Checklist (LASC)
 - 17-items, with 3 subscales
 - Elevated scores indicative of PTSD

1996 Navy Family Advocacy Program Study of Recruits: Findings

- 31-36%* reported any self-defined childhood abuse
 - 22-26% of men reported past abuse
 - 41-46% of women reported past abuse
- 60-63% reported any behaviorally-defined childhood abuse
 - 55-56% of men reported past abuse
 - 66-69% of women reported past abuse

*Confidential vs. anonymous participants;
anonymous consistently report higher prevalence.

1996 Navy Family Advocacy Program Study of Recruits: Findings

Using the behaviorally defined sexual assault measure:

- 27.2% of women reported being raped
- 26.7% of women reported attempted rape
- 50.2% of women reported coercive sexual experiences

- 10.6% of men reported committing rape
- 7.5% of men reported attempting rape
- 30.9% of men reported coercive sexual behavior

1996 Navy Family Advocacy Program Study of Recruits: Findings

- Sexual behaviors:

Female CSA victims had more lifetime sex partners.

Female CSA victims were 5 times more likely to report pre-military adult rape than non-victims.

Male victims of both CPA and CSA were 4-6 times more likely to be perpetrators of rape than non-victims.

- Potential for child abuse:

Both male and female victims of CSA scored higher on child abuse potential inventory.

1996 Navy Family Advocacy Program Study of Recruits: Findings

- Attrition:
Only CSA history associated with attrition in first four years of service (OR=1.42; 95% CI 1.20-1.67)
- Alcohol problems:
All forms of childhood abuse associated with alcohol problems within first four years of service.
- Psychological adjustment:
CSA history in women associated with lower scores.

1996 Navy Family Advocacy Program Study of Recruits: Findings

PTSD

- 15% of respondents met criteria for PTSD on entry
- CSA associated with PTSD symptoms in women
- CPA associated with PTSD symptoms in men
- PTSD symptoms at entry were associated with more healthcare use over the following 2 years of service.

1996 Navy Family Advocacy Program Study of Recruits

Selected references

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Navy Sailors Health Inventory Program (SHIP)



www.nsgreatlakes.navy.mil

- SHIP questionnaire given to all new Navy recruits at Great Lakes since 1995
>400,000 recruits, ~15% women
- 191 items on medical history and health behaviors
- One ACE-related item, requesting Y/N response:
“[Have you ever had a] history of physical, emotional, or sexual abuse?”

Navy Sailors Health Inventory Program (SHIP):

Findings

3.4% of recruits report any history of abuse

- 2.0% of male recruits report being abused
- 10.4% of female recruits report being abused

Those reporting abuse, are also more likely to report:

- Smoking
- Problems with alcohol or drug use
- Depression, anxiety, or phobias
- Past attempted suicide:
 - 11.8% of male victims report attempted suicide
 - 4.7% of female victims report attempted suicide

Navy Sailors Health Inventory Program (SHIP): Findings

Attrition:

“History of abuse” associated with 1st-year attrition, (OR=1.32; 95% CI 1.19-1.46), especially attrition for behavioral (OR=1.34) or administrative (OR=1.43) causes.

Other early career and family dysfunction:

When adjusted for other factors, “history of abuse” not associated with receiving alcohol treatment or Family Advocacy Program referral within the 1st year of service.

Booth-Kewley et al. Predictors of Navy attrition, part I: Analysis of 1-year attrition. Mil Med 2002;167(9):760-9.

Larson et al. Predictors of Navy attrition, part II: A demonstration of potential usefulness for screening. Mil Med 2002;167(9):770-6.

Navy Sailors Health Inventory Program (SHIP) question compared to the Navy Family Advocacy Program (FAP) Study definitions of “history of abuse”

- If the Navy FAP study definitions are considered the better measures of true victimization, the SHIP question would have a sensitivity of 9-16%* and a specificity of 90-91% in identifying victims of childhood abuse.

*Lower sensitivity is associated with behaviorally defined victimization on Navy FAP study.

Recruit Assessment Program (RAP)



NHRC Code 25 photo

Questionnaire pilot-tested at Marine Corps Recruit Depot (MCRD) in San Diego, beginning in June 2001.

Administered to >66,300 male Marine Corps recruits

Original RAP instrument assessed ACE via Y/N responses to 7 questions. Instrument was revised in 2002; data evaluated from 48,600 recruits who completed RAP instrument with expanded ACE questions.

Recruit Assessment Program (RAP)

Assessment of physical neglect

“There was someone to take care of you and protect you.”*

| | |
|-----------------------|-------------|
| Never true | 4.4% |
| Rarely true | 3.6% |
| Sometimes true | 9.2% |
| Often true | 22.1% |
| Very Often | 56.1% |
| Missing | 4.7% |

Assessment of emotional neglect

“You felt loved.”

| | |
|-----------------------|-------------|
| Never true | 2.8% |
| Rarely true | 2.8% |
| Sometimes true | 9.6% |
| Often true | 23.1% |
| Very Often | 56.7% |
| Missing | 4.9% |

*“...when you were growing up, before you were 17 years old... you felt.”

Recruit Assessment Program (RAP)

Assessment of childhood emotional abuse

“How often did a parent/adult in your home swear at you, insult you, or put you down?”

| | |
|-------------------|-------------|
| Never | 30.1% |
| Once/Twice | 28.9% |
| Sometimes | 23.9% |
| Often | 7.5% |
| Very Often | 4.5% |
| Missing | 5.0% |

Assessment of childhood physical abuse

How often did a parent/adult in your home push, grab, shove, slap, or throw something at you?

| | |
|-------------------|-------------|
| Never | 61.5% |
| Once/Twice | 22.2% |
| Sometimes | 9.4% |
| Often | 1.8% |
| Very Often | 0.8% |
| Missing | 4.3% |

Recruit Assessment Program (RAP)

Assessment of domestic violence

“How often did a parent/adult in your home push, grab, shove, slap, or throw something at each other?”

| | |
|-------------------|-------------|
| Never | 74.3% |
| Once/Twice | 13.8% |
| Sometimes | 5.7% |
| Often | 1.2% |
| Very Often | 0.4% |
| Missing | 4.9% |

Assessment of childhood sexual abuse

“How often did an adult ever touch you sexually or try to make you touch them sexually?”

| | |
|-------------------|-------------|
| Never | 93.2% |
| Once/Twice | 0.9% |
| Sometimes | 0.7% |
| Often | 0.1% |
| Very Often | 0.1% |
| Missing | 4.9% |

Recruit Assessment Program (RAP)

Overall, 32.7% of male Marine Corps recruits reported some history of adverse childhood experience(s), as defined here.

Given the six ACE categories:

- 16.3% endorsed one

- 10.4% endorsed two

- 3.6% endorsed three

- 2.2% endorsed four or more

- categories of ACE history.

Recruit Assessment Program (RAP)

In unadjusted analyses, those with ACE history were:

- More likely to have joined the military to “leave problems at home”
- More likely to anticipate a 20-year career in the military.
- Less likely to have been raised in a two-parent home.

Recruit Assessment Program (RAP)



Analyses of RAP data in progress:

- History of ACE and underage, problem alcohol use among male Marine Corps recruits.
- History of ACE as assessed at basic training and at Medical Entrance Processing Stations.
- History of ACE and subsequent PTSD among Marine Corps deployers returned from OEF/OIF.

US Military Studies on Adverse Childhood Experiences:

Summary and Discussion

- ACE histories are fairly common in young adults joining the US military.
- Assessing ACE history is challenging; findings depend greatly on methodology and specific questions asked.
- ACE histories are related to several pre-military risk factors that might be expected (e.g., alcohol use).
- ACE histories are fairly consistently related to early attrition; relationship to later military performance is unclear.

Acknowledgments

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1996 Navy Family Advocacy Program Study

Dr. Lex Merrill, NHRC and Dr. Joel Milner, Northern Illinois University

Navy SHIP Studies

Dr. Gerald Larson and Team, Naval Health Research Center

RAP and Future HART-A Work

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[http://www.nhrc.navy.mil/rsch/code25/program5
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Recruit Assessment Program (RAP) and Evolution to HART-A

Specific ACE questions not included in current draft of HART-A.

Related questions, and their RAP response rates:

“Did any of the following events EVER happen in your life?

“You saw a close family member or friend
being badly injured or killed. 10.6%

“You were seriously attacked, beaten up,
or assaulted.

4.6%

“You were threatened with a knife, gun,
club, or other weapon. 13.1%

“You were raped (someone forced you